



CLASS OF 1900, WASHINGTON UNIVERSITY.

1. Grimm, Henry England—Civil Engineer—333 East avenue.
2. Lewis, John James—Arts—Webster Grove, Mo.
3. Horvitz, Alexander Earle—Arts—1222 Carr street.

4. Toensfeldt, Hans Carl—Civil Engineer—215 South Ninth street.
5. Koken, Ernest C. F.—Civil Engineer—223 Hawthorne boulevard.
6. Dicke, Edward Christian—Civil Engineer—1911 Hebert street.

7. McClure, Ralph Stanton—Civil Engineer—844 Smiley avenue.
8. Eilers, Roy Matthew—Arts—1616 King's Highway.
9. Leavitt, Sherman—Chemist—5615 Cabanne place.

10. Henby, William Hastings—Civil Engineer—340 Morgan street.
11. Kammerer, Alfred Louis—Chemist—2724 Dayton street.
12. Burgess, Samuel Allen—Arts—233 Harper street.
13. Klein, Mary Jeanette—Arts 1940 Arsenal street.

14. Mermet, Blanche—Arts—3905 Finney avenue.
15. Pierson, Ruth Howard—Arts—1211 North Garrison avenue.
16. Wesseler, William Julius—Arts—2518 South Thirteenth street.

17. Phillips, Silas Bent—Chemist—442 Morgan street.
18. Steinbreder, Alvina Louisa—Arts—5943 Vernon avenue.
19. Furham, Anna May—Arts—2943 Thomas street.
20. Schmiedje, Adolph Henry—Chemist—

21. Goebel, Julius Christian—Arts—1218 South Fourteenth street.
22. Chandler, Albert Barbour—Arts—Kirkwood, Mo.
23. Ritschy, Lucia John—Mechanical Engineer—333 Henrietta street.

DANGER IN ADULTERATED MILK.

Chemists and Physicians Discuss the Use of Formalin as a Preservative.

WRITTEN FOR THE SUNDAY REPUBLIC.
Chicago is engaged just now in a war on "fixed" milk. The Board of Health and the City Chemist are working together to secure the conviction of dealers who are "fixing" it, and are issuing warnings to the public to look out for and avoid the milkman who offers to guarantee that his milk will "keep fresh without the use of food."

The City Chemist has secured a number of samples of milk, which contain formalin and other irritant poisons, and has fed these to guinea-pigs and cats, with fatal results. He argues that if the milk will kill these animals it is certainly unfit for human food, and will make a number of demonstrations before the next Grand Jury. The cases will be prosecuted with the utmost vigor. In the hope of putting a stop to the practice, which, it is believed, has already cost the lives of many children and not a few grown persons.

While the practice of using preservatives in milk has been indulged in to a limited degree, and with secrecy, for several years, it was never so common as at present, and the kinds of drugs heretofore used have not been so deadly. In former times the dealer only tried to save off the chemical action by which milk becomes sour for six or twelve hours. Now there are many dealers who advertise that their milk will keep fresh from three to five days. The chemicals necessary to keep it sweet for this length of time are powerful in action and all of them poisonous to a greater or less degree.

Locally, there has not been much evidence of milk adulteration for some months past, and Milk Inspector Helwig says that the city's supply was never more bountiful or of better quality than at present. "I had some trouble with adulterants last year," he said, "and had to prosecute one or two concerns. I expect more trouble later on in the season, when the pastures get poor, and there is a falling off in the supply. It is only when the supply is short that the dealers go to the trouble and expense of fixing milk. In ordinary times it comes to them fresh, is handled promptly, and everything goes well. When the supply gets low, some of them

do not hesitate to stretch one gallon into two by the addition of condensed milk and water. They also want to keep it as long as possible, and use preservatives. Of course we are constantly on the alert, and as the dairies do not know when and how we obtain samples of their milk, they naturally are a bit cautious.

"I have found only two samples of chemically treated milk this year, and both of these were doctored by the farmers, who shipped the cans to the local dairyman. I got the samples from the original cans, and those two farmers got warnings that will probably keep them straight for some time to come.

"I am convinced that little, if any, doctored milk is being sold in the city at present. But, as I said before, we may look for trouble of this kind later in the year, and I would advise every housekeeper to look well into the question of milk, and be sure that it is kept free from contamination after it is delivered to her."

Mr. John Geiger, a well-known chemist and specialist in the adulteration of milk, was asked to explain for the benefit of Republic readers, what kinds of chemicals are used for preserving milk, and their effect on the human body. He said:

"Most of these so-called preservatives, or preservatives, as they are known technically, are made from boracic or salicylic acid and are easily detected by analysis. One of the simplest ways of discovering their presence in milk is by the addition of commercial sulphuric acid. This test could easily be made at home, or by the neighborhood druggist. If the milk shows a purple tinge after the addition of the acid, it has been tampered with; otherwise it takes on a brownish color, which is natural.

"The presence of formalin may also be detected by the sulphuric acid test, but this is neither so simple nor readily explained that the average reader would understand it.

"Of the various preservatives, formalin is by far the most dangerous, and the dealer or producer who uses it could hardly be punished too severely. We have not carried the tests far enough as yet to be able to state exactly how the stomach is affected by milk treated with it; but we do know that small animals like the guinea-pig, the hare and the cat can be killed in a short

THREE ST. LOUIS SINGERS IN ST. LOUIS OPERA.

GERTRUDE LODGE.

MRS. CHARLES VAN STUDDIFORD.

NELLIE DRAGGINS.

while by keeping them on a diet of milk which has been 'preserved' by formalin.

"There is no excuse for the use of any of these preparations, and no honest dairyman will resort to them. Milk brought in by train on the day it is taken from the cow, and properly handled, will keep fresh without adulteration for twenty-four hours. It must, of course, be stored in absolutely clean vessels, and kept on ice; and if this is done it will be found perfectly wholesome and sweet at the end of the second day. Doctor Otto Suter was asked to tell the case.

effect of formalin on milk, and the way the adulterated fluid would affect the human system. He said: "Formalin is one of the most powerful and diffusive antiseptics known. It is really a 40 per cent solution of formaldehyde, which is one of the greatest of irritants. A few drops of it in a ten or twenty gallon can of milk would be distributed to every atom of the milk in the shortest possible space of time, and would have the effect of destroying those germs which are the cause of fermentation. By destroying these germs, or rendering them powerless for the time, the milk is kept from souring much longer than would naturally be the case.

"The person who drinks milk thus treated would soon have the lining of his stomach so irritated that almost any kind of complication of the digestive apparatus might ensue.

"Milk that has been tampered with in any way is bad, because it is particularly susceptible to contamination, and is a natural culture medium for many kinds of germs. Anything that will destroy these germs will destroy the tissues of the stomach, and of the various preservatives I can think of none worse than formalin."

THE SEEDS CAME UP.

From Collier's Weekly.
He carefully prepared the small garden plot, while his wife, deeply interested in his labor, stood watching him. After he had put in the seeds and smoothed over the bed, his wife took his arm to accompany him to the house, and on the way she asked:

"When will the seeds come up, John?" Laying his hand carelessly on her shoulder, the smart man said:

"I don't expect them to come up at all, my dear."

"You don't!" she exclaimed. "Then why have you gone to all that trouble?"

With a smile that springs from superior knowledge, he answered: "The seeds won't come up, but the plants and flowers will, by and by."

Yet he was wrong; for his neighbor's hens got into his garden, and the seeds did come up.